

Wochnick, Heather M CIV USN (US)

From: Ryan Miya <RMiya@dtsc.ca.gov>
Sent: Wednesday, January 19, 2011 10:22
To: cynthia.evanko@aon.com; Gregory_Schilz@aon.com; JAB@BCLTLAW.com; jeff.giangiuli@calibresys.com; jill.bensen@ch2m.com; Leslie.Lundgren@ch2m.com; carr.robert@epa.gov; Kloss.Sarah@epamail.epa.gov; Ripperda.Mark@epamail.epa.gov; JAustin@Geosyntec.com; RBrandt@Geosyntec.com; Barry.Steinberg@kutakrock.com; george.schlossberg@kutakrock.com; stephen.proud@lennar.com; Suzanne.Hudson@lennar.com; drathnayake@mactec.com; JFenton@mactec.com; LRHENDRY@mactec.com; Yantos, Christopher N CTR OASN (EI&E), BRAC PMO West; Gilkey, Douglas E CIV OASN (EI&E), BRAC PMO West; Larson, Elizabeth A CIV OASN (EI&E), BRAC PMO West; Kayaci, G Hamide CTR OASN (EI&E), BRAC PMO West; Dunn, Jacqueline E CIV NAVFAC SW, PACO; Whitcomb, James H CIV NAVFAC SW; Cummins, John M CIV NAVFAC SW; Forman, Keith S CIV OASN (EI&E), BRAC PMO West; Urizar, Lara L CIV NAVFAC SW, PACO; Kito, Melanie R CIV NAVFAC SW; Callaway, Rex CIV NAVFAC SW; Liotta, Rita M CIV WEST Counsel; Hunt, Bob A CTR OASN (EI&E), BRAC PMO West; Loli, Simon CTR OASN (EI&E), BRAC PMO West; Macchiarella, Thomas L CIV OASN (EI&E), BRAC PMO West; colinbarreno@paulhastings.com; gordonhart@paulhastings.com; Amy Brownell; AndreaBruss; Elaine Warren; Thor Kaslofsky; Tiffany Bohee; VictorPappalardo; kbrasaemle@techlawinc.com; dcshipman@treadwellrollo.com; gejohnson@treadwellrollo.com; sreinis@treadwellrollo.com; steve.hall@ttemi.com; tim.mower@ttemi.com; ANauble@waterboards.ca.gov; RSteenenson@waterboards.ca.gov
Cc: Robert Elliott
Subject: DTSC comments to AOC Statement of Work
Attachments: AOC SOW_DTSC comments_1.19.11.doc
Categories: Hunters Point

Please see the attached DTSC comments to the AOC SOW. Thanks, Ryan

Ryan Miya
Senior Hazardous Substances Scientist
Brownfields and Environmental Restoration Program - Berkeley Office Department of Toxic Substances Control
700 Heinz Avenue
Berkeley, CA 94710-2721
Phone: 510-540-3775
FAX: 510-540-3819

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APPENDIX C STATEMENT OF WORK

ADMINISTRATIVE ORDER ON CONSENT FOR REMEDIAL ACTION FOR CLEANUP OF PORTIONS OF THE FORMER HUNTER'S POINT NAVAL SHIPYARD U.S. EPA Region 9

1. PURPOSE

The primary purposes of this Statement of Work ("SOW") are to: (1) implement the Administrative Order on Consent for Remedial Design/Remedial Action ("RD/RA") for Cleanup of Portions of the Former Hunters Point Naval Shipyard ("AOC"), Docket No. 2010-14; (2) facilitate and expedite removal actions, if appropriate or necessary to control hazardous substances, pollutants and contaminants of concern; (3) expedite cleanup of hazardous substances which pose an unacceptable risk to human health and the environment at the Property, excluding Navy Retained Conditions and (4) implement operation and maintenance procedures until the clean-up is complete.

This SOW addresses approximately 100-acres of the former Hunters Point Naval Shipyard located in San Francisco County, CA. The Property includes Parcels B (excluding IR Sites 07/18) and G.

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This SOW outlines the work the Respondents, San Francisco Redevelopment Agency ("SFRA") and Lennar Urban, has agreed to perform pursuant to the AOC. This SOW does not limit or preclude EPA from requiring additional work.

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The Parties acknowledge that the Navy has completed significant portions of the remediation of groundwater, soil, and soil gas contamination on the Property pursuant to the Amended Record of Decision for Parcel B (1/2009) and the Record of Decision for Parcel G (2/2009) and that the Tasks described below remain to be completed.

Unless otherwise expressly provided herein, terms used in this SOW which are defined in the AOC shall have the meaning assigned to them in the AOC.

Deliverables required under this SOW shall be submitted according to Section XIV (EPA Approval of Plans and Other Submissions) of the AOC. EPA will review and approve the documents in consultation with [the Department of Toxic Substances Control \("DTSC"\)](#) and [the San Francisco Bay Regional Water Quality Control Board \("RWQCB"\)](#). EPA will determine a schedule for the submittal and review of deliverables in consultation with DTSC and the RWQCB. Respondent may submit deliverables in advance of the schedules presented herein or may combine several deliverables into a composite submittal. If deliverables are combined into a composite submittal, Respondent shall include each deliverable as a discrete and readily identifiable section within the larger submittal document. This SOW does not preclude the

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shortening of the schedules presented herein if deliverables submitted in advance of their deadlines are approved by EPA in consultation with DTSC and RWQCB.

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2.0. TECHNICAL SPECIFICATIONS AND REQUIREMENTS

The major components of the remediation activities that comprise the Work are outlined below:

1. Project Management;
2. Public Involvement;
3. Remedial Action Work Plan;
4. Remedy Implementation;
5. Remedial Action Closeout Report and Closeout Inspections;
6. O&M/Performance Monitoring;
7. Five Year Reviews;
8. Removal Actions; and
9. Completion of Work.

SFRA shall provide the necessary qualified and licensed personnel, equipment, and resources to successfully execute the Work under the AOC.

2.1. Project Management

Within 30 days of the Effective Date of the AOC, a scoping meeting shall be held to discuss the overall project. The purpose of the meeting shall be for Respondent to describe its proposed approach to complying with the AOC, in particular, Section IX (Performance of the Work by Respondent), and this SOW and to solicit input from EPA, DTSC and RWQCB. The following topics, at a minimum, should be addressed: (i) How Respondent shall prioritize tasks/parcels; (ii) Respondent's preliminary schedule for accomplishing the Remedial Action ("RA"); and (iii) contingencies for stop work or reprioritization of tasks or parcels due to unanticipated events. Once EPA has approved the proposed approach for accomplishing the work, EPA, at its discretion, and in consultation with DTSC and RWQCB, shall present a schedule showing the dates each task and/or deliverable is to be completed.

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2.1.1 RA Progress Meetings and Reports

Respondent shall coordinate and conduct monthly RA progress meetings with EPA, DTSC and RWQCB. The Progress Meetings shall address the status of project design, construction, and implementation activities, schedule changes, test results, observations and findings, issues of noncompliance, and upcoming activities. The Respondent shall document project progress on a monthly basis. The monthly reports shall report on ongoing field audit findings and any corrective actions, planned or taken. The monthly reports shall also include: 1) summary of activities at the site; 2) list of any building demolitions; 3) summary of any field discoveries and actions; 4) any data quality

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assessments; 5) any other anticipated intrusive activities and 6) planned activities including field work and deliverables for the coming month. Upon approval by EPA, and in consultation with DTSC and RWQCB, the frequency of these meetings and reports may be reduced, eliminated, or replaced with written reports.

2.1.2 Administrative Record and Public Repository

The Respondent shall assist EPA with the administrative record (AR) including ensuring all project documents, including drafts, draft finals, and final versions, along with comments and responses to comments and all correspondence are available in the AR for review by the public.

SFRA shall maintain a project repository, as well as provide copies to the Navy for the Navy's maintenance of the Administrative Record files as required by CERCLA, the NCP, and other applicable laws and regulations.

2.2 Public Involvement

Respondent shall prepare and submit a Community Involvement Plan (CIP) within 30 days of the Project Scoping Meeting for review and approval by EPA, in consultation with DTSC and RWQCB. The CIP shall be based on an understanding of the issues and concerns of the community and the citizens' indicated preferences for receiving information regarding Site activities. The CIP shall identify the location of the Administrative Record repository and other documents to ensure community access to Site information and understanding of Site activities. The CIP should provide opportunities for public input throughout the remedial planning and action process. Respondent may develop a CIP that relies on or is integrated with the Navy's existing CIP. The Respondent shall assist EPA with community relations functions as needed including preparation for community meetings, preparation of fact sheets, and interviews with tenants and the surrounding community.

2.3 Remedial Action Work Plans

Respondent shall prepare and submit a Remedial Action Work Plan (RAWP), within 30 days of the Project Scoping Meeting, for review and approval by EPA, in consultation with DTSC and RWQCB. The RAWP shall be the primary plan by which the Respondent controls the Work necessary to implement the remedy and achieve the Performance Standards as set forth in design plans and specifications in the approved final remedial design documents ("Final Remedial Design Package Parcel B, Excluding IR Sites 7 and 18" [ChaduxTt, date TBD] and "Final Remedial Design Package Parcel G" [ChaduxTt, date TBD]). The RAWPs may also include requests for revisions to the approved final remedial designs. Any revisions to the remedial designs must still meet the requirements of the CERCLA RODs and the AOC and be approved by EPA, in consultation with DTSC and the RWQCB. The RAWP shall describe the procedures Respondent will employ to perform the activities required and the specific objectives of

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these activities in performing the Work. The following areas shall be addressed in one or more RAWPs:

- Project background narrative with a statement of problems posed by the Property and the objectives of the remedial actions;
- Sequencing of the Work, including personnel and facilities mobilization logistics, significant activities and deliverables, and a comprehensive project schedule;
- Detailed description of each remedial activity, with design drawings as appropriate, and the methods and procedures that will be used to implement the remedy and achieve the Performance Objectives;
- Format for Progress Reports to be submitted;
- Control of Property Access;
- Format of regularly scheduled remedial construction progress meetings;
- Procedures for modifying the RAWP, final plans and designs, other management plans, deliverables and schedules required by this SOW;
- Activity-specific sampling plans and necessary instrument calibration, if not covered by currently approved sampling plans;
- Procedures for management and organization of construction, field operations and Work activities including equipment maintenance and QA/QC;
- Processes, procedures and safeguards for ensuring containment of contaminants and pollutants and compliance with applicable federal, state and local requirements that may be triggered by the RA;
- Procedures for documenting field changes during construction;
- Procedures for the monitoring and mitigation of impacts to habitat, existing buildings, permanent structures, and occupants;
- Waste Materials storage and disposal; and
- Procedures for the integration and coordination with any entities involved in any future redevelopment of the Property, including procedures for transfer and dissemination of information on design, construction, operations, monitoring, Property security and access, corrective action, emergency response, and community involvement.

2.3.1 Additional Plans

Several additional plans supporting the remedial action shall be included with the RAWP as required below.

2.3.1.1 Dust Control Plan and Asbestos Dust Mitigation Plan

A Dust Control Plan (DCP) identifies the measures that will be taken to reduce particulate emissions during the Work. The DCP shall be prepared in accordance with the requirements in Article 31 of the San Francisco Health Code and certain Bay Area Air Quality Management District (BAAQMD) regulations often applicable to earth moving activities. Exposure of onsite construction workers to dust containing COCs will

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be minimized, and generation of nuisance dust will also be minimized to comply SFDPH requirements prohibiting visible dust on San Francisco construction sites.

Naturally occurring asbestos (NOA) has been found in the serpentine bedrock and soil throughout the Hunters Point area. An Asbestos Dust Mitigation Plan (ADMP) will be submitted that describes the measures to be taken to minimize asbestos dust and comply with requirements of the California Air Resources Board Airborne Toxic Control Measures (ATCM).

2.3.1.2 Health and Safety Plan

The Respondent shall submit a health and safety plan (HASP) with the Intermediate RD for review by EPA in consultation with DTSC and the RWQCB, for any on-site activities taking place during the design phase. Any comments on the HASP should be updated and submitted with the Pre-Final Design. The Respondent shall review the RD information and modify the HASP developed for the RD/RA Work Plan as necessary to address the activities to be conducted. It shall be designed to protect on-site personnel as well as off-site workers, tenants and residents from physical, chemical, and other hazards posed by the construction, operation and maintenance activities of the RA.

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2.3.1.3 Construction Quality Assurance Plan

The Respondent shall develop and implement a Construction Quality Assurance Plan (CQAP) for review and approval by EPA in consultation with the DTSC and the RWQCB. The CQAP is a site specific document that specifies procedures to ensure that the completed RA works meets or exceeds all design criteria and specifications. A draft CQAP shall be submitted with the Intermediate Design. The complete CQAP shall be submitted with the Pre-Final Design. The CQAP should discuss: (1) roles and responsibility of those completing the construction; (2) qualifications of personnel completing the construction; (3) inspection activities; (4) sampling requirements and (5) documentation for the construction.

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2.3.1.4 Sampling & Analysis Plan (SAP)/Quality Assurance Project Plan (QAPP)

Respondent shall prepare a Sampling and Analysis Plan (SAP) for groundwater monitoring and submit it for review and approval by EPA, in consultation with DTSC and RWQCB. The SAP shall ensure that data collection and analytical activities are conducted in accordance with EPA guidelines, including EPA SW-846. The SAP shall provide a mechanism for planning field activities and shall consist of a Quality Assurance Project Plan (QAPP) and Field Sampling Plan (FSP). The SAP shall also cover any other anticipated sampling activities, such as soil, or soil vapor for modifying ARICs, or provide for the submission of SAP addendums on an as needed basis.

The QAPP shall describe the policy, organization, functional activities and quality assurance and quality control protocols necessary to achieve DQOs dictated by the intended use of the data. The QAPP shall include Quality Assurance (QA) and Quality Control (QC). QA shall be an integrated system of management activities involving planning, implementation, assessment, reporting, and quality improvement to ensure that

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a process, item, or service is of the type and quality needed to meet project requirements defined in the RA Work Plan. QC shall be the overall system of technical activities that measures the attributes and performance of a process, item, or service against defined standards to verify that they meet the stated requirements established in the RA Work Plan. The QAPP shall provide for oversight of field activities and data by EPA, DTSC and RWQCB. The FSP shall provide guidance for all fieldwork by defining in detail the sampling and data-gathering methods to be used on the project by parcel or sub-parcel. The FSP should clearly state sampling objectives; necessary equipment; sample types, locations and frequency; analyses of interest; and a sampling and deliverables schedule.

2.3.1.5 Site Access and Security Plan

Within 30 days of completion of the RD, the Respondent shall prepare and submit to EPA for review and approval in consultation with the DTSC and the RWQCB a Site Access and Security Plan. This plan should describe activities the Respondent will undertake to monitor and control access to the Property during implementation of the response actions and period of work performance.

2.3.1.6 Operation and Maintenance Plan

The Respondent shall prepare and submit to EPA for review and approval in consultation with DTSC and the RWQCB, an Operation and Maintenance (O&M) Plan to cover long term operation and maintenance of the RA. The final O&M Plan shall be submitted by the Respondent prior to or at the completion of construction of the RA and shall incorporate any modifications or corrections.

The O&M Plan shall include the following:

- Description of existing and new Property facilities and environmental control systems;
- Integration and coordination requirements of the existing and new systems;
- Property administration, utility and support facilities, data management and management information systems, and reporting;
- Procedures for verifying and documenting compliance with QC requirements;
- Procedures of operational emergency response;
- Maintenance procedures and schedules;
- Compliance and process monitoring procedures and schedules;
- Formats for Noncompliance Notification, Compliance Action Plan, and Noncompliance Correction Report;
- Contingency plans with cost estimates that provide an organized, planned, and coordinated course of action to be followed by the Respondent in the case of an unexpected failure of remedial systems, or release or threat of release of Waste Materials;
- Emergency repair and replacement procedures;

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- Appendices, including sampling plans for each of the monitoring and sampling activities, if not addressed as separate documents;
- Appendix addressing Compliance Testing, if not addressed as separate documents;
- Procedures for management and control of project data; and
- Procedures for transitioning O&M requirements and activities to new entities involved in any future redevelopment, if approved by EPA.

2.3.1.7 Performance Standard Verification Plans

The Respondent shall prepare and submit to EPA for review and approval in consultation with DTSC and the RWQCB a Performance Standard Verification Plan (PSVP) to consolidate information for required testing and sampling and analyses to ensure that both short term and long term performance standards for the RA are met. Performance standards may include clean-up standards for contaminated environmental media as well as the measurement of the effectiveness of engineering controls or other controls used to control migration and exposure of contaminants.

2.3.1.8 Land Use Implementation Plan

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The Respondent shall prepare and submit to EPA for review and approval in consultation with DTSC and the RWQCB a Land Use Implementation Plan describing procedures for implementation, monitoring and enforcement of any [Institutional Controls \(“ICs”\)](#) for the Property, including but not limited to land use covenants, as selected in the ROD(s);

2.3.1.9 Storm Water Pollution Prevention Plan

The Respondent shall prepare and submit to EPA for review and approval in consultation with DTSC and the RWQCB, a Storm Water Pollution Prevention Plan (SWPPP) and related monitoring and reporting activities.

2.4 Remedy Implementation

The Navy has followed the CERCLA process in the prior characterization of environmental conditions, analysis of remedial action alternatives, and selection of the remedy. Site characterization data are available in various reports referenced in Appendix A herein and in the Administrative Record files. The site-specific remedial activities required by the CERCLA RODs are summarized in [Table 1](#). The remedial actions, including institutional controls, for the Site will comply with the AOC, CERCLA, the NCP, and other applicable state and federal laws and regulations and shall be protective of human health and the environment. The CERCLA RODs, Remedial Design Packages and the AOC set forth the specific components of the remedy to be implemented at the Site. Those remedial components are summarized below:

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2.4.1 Soil Vapor Extraction (SVE) System Expansion and Operation

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SFRA shall expand and operate the SVE system inside Building 123. SFRA shall decommission the SVE system after approval from the Environmental Regulatory Agencies. Details on operation of the SVE system including monitoring, reporting, and O&M activities are contained in the “Final Remedial Design Package for Parcel B, Excluding IR Sites 7 and 18” (ChaduxTt, date TBD). The SVE system shall be operated until the remedial action objectives specified in the Remedial Design Package and the RAWP have been met. The SFRA shall submit a RACR and obtain regulatory closure for this action in accordance with the AOC (See Section 2.5).

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2.4.2 Groundwater Remediation

SFRA shall inject polylactate at the IR Site 10 Volatile Organic Compound (“VOC”) plume for source control and to enhance natural attenuation. Injection and subsequent monitoring of the natural attenuation will be conducted in accordance with requirements and procedures specified in the Remedial Design Package and RAWP. SFRA shall conduct groundwater remediation until the remedial action goals for groundwater are achieved as presented in the approved CERCLA RODs and the RAMPs contained in “Final Remedial Design Package Parcel B, Excluding IR Sites 7 and 18” (ChaduxTt, date TBD), and “Final Remedial Design Package Parcel G” (ChaduxTt, date TBD). The SFRA shall submit a RACR and obtain regulatory closure for this action in accordance with the AOC (See Section 2.5).

2.4.3 Covers over Soil

SFRA shall construct a durable cover over the Site that (1) meets the specifications of the “Final Remedial Design Package Parcel B, Excluding IR Sites 7 and 18” (ChaduxTt, date TBD), and “Final Remedial Design Package Parcel G” (ChaduxTt, date TBD), or (2) meets the requirements of San Francisco Department of Public Works or the San Francisco Department of Building Inspection codes, or (3) fulfills the requirements of the AOC or is otherwise approved by the Environmental Regulatory Agencies. The SFRA shall submit a RACR and obtain regulatory closure for this action in accordance with the AOC (See Section 2.5). Regulatory Closure for covers must be achieved no later than 7 years after the date of execution of the AOC.

2.4.4 Shoreline Revetment

SFRA shall construct a shoreline revetment for certain portions of the shoreline at Parcel B to prevent erosion and migration of underlying soil and sediment into San Francisco Bay. The shoreline revetment shall meet the specifications of the “Final Remedial Design Package Parcel B, Excluding IR Sites 7 and 18” (ChaduxTt, date TBD), or otherwise be approved by the Environmental Regulatory Agencies. The SFRA shall submit a RACR and obtain regulatory closure for this action in accordance with the AOC (See Section 2.5). Regulatory Closure for shoreline revetment must be achieved no later than 7 years after the date of execution of the AOC.

2.4.5 Soil Vapor Intrusion Mitigation

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SFRA shall design and implement engineering controls to prevent exposure to VOCs in soil gas that may accumulate within existing or future enclosed structures at concentrations that would pose unacceptable risk via inhalation of indoor vapors, based on the planned reuse. The Navy has established an initial ARIC for VOC vapors based on soil gas surveys conducted prior to redevelopment. The initial ARIC is documented in the XXX. Examples of acceptable engineering controls are presented in the “Final Remedial Design Package Parcel B, Excluding IR Sites 7 and 18”, (ChaduxTt, date TBD) and “Final Remedial Design Package Parcel G” (ChaduxTt, date TBD) and the RAWP.

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Vapor mitigation shall meet the remedial action objectives stated in the “Final Remedial Design Package Parcel B, Excluding IR Sites 7 and 18” (ChaduxTt, date TBD), “Final Remedial Design Package Parcel G” (ChaduxTt, date TBD), and the requirements for vapor mitigation in “Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air, Interim Final” dated December 15, 2004, and revised on February 7, 2005. The SFRA shall submit a RACR and obtain regulatory closure for this action in accordance with the AOC (See Section 2.5).

2.4.6 Long-term Groundwater Monitoring

SFRA shall monitor elevations of and chemical concentrations in groundwater according to the requirements in the RAMPs that are included in “Final Remedial Design Package Parcel B, Excluding IR Sites 7 and 18” (ChaduxTt, date TBD), and “Final Remedial Design Package Parcel G” (ChaduxTt, date TBD). Long term groundwater monitoring shall continue until such time as the regulatory agencies have issued regulatory closure for groundwater conditions (See Section 2.5).

2.4.7 Operation and Maintenance/Performance Monitoring

Respondent shall implement performance monitoring and operation and maintenance procedures as required by the approved PSVP and O&M Plan for the RA once it is demonstrated that the RA components are operational and functional.

Respondent shall submit for review to EPA, DTSC and the RWQCB on a monthly basis any sampling, analysis and system performance data for any treatment or engineering systems required to be monitored during the O&M phase.

Respondent shall also prepare and submit for review to EPA, DTSC and the RWQCB annual progress reports during the operation and maintenance/performance monitoring phase of the RA. The progress report should include the same information as required in the RA monthly progress reports as well as an evaluation of the effectiveness of any system in meeting clean-up and performance goals of the RA.

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2.4.8 Implementation of Institutional Controls and other Long-Term Obligations

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SFRA shall implement the institutional control requirements of the LUC RDs that are included in the “Final Remedial Design Package Parcel B, Excluding IR Sites 7 and 18” (ChaduxTt, date TBD), “Final Remedial Design Package Parcel G” (ChaduxTt, date TBD), and CRUP(s) and Deed(s) that are signed and recorded at the time of transfer of title. SFRA shall ensure controls remain in place and shall monitor implementation of corrective actions for violations.

2.5 Remedial Action Completion Report (RACR) and Regulatory Closure Documentation

2.5.1 Pre-Final Inspection

Within 90 days after Respondent concludes that the RA has been fully performed and the Performance Standards have been attained, Respondent shall schedule and conduct a pre-certification inspection to be attended by Respondent, EPA, DTSC and RWQCB to verify that the remedy is operational and functional.

2.5.2 Final Inspection

Upon certification by EPA that all items identified by EPA in consultation with DTSC and the RWQCB during the Pre-Final Construction Inspection have been addressed, Respondent, EPA, DTSC and RWQCB, if they choose, shall conduct a Final Construction Inspection. The purpose of the inspection is to verify that all construction has been completed according to the RD and RAWP, that the remedy meets the Property-specific remediation goals, as specified in the ROD, and that the remedy is operating properly.

2.5.3 Remedial Action Completion Report

Upon satisfactory completion of the Final Inspection, Respondent shall, within 30 days of the inspection, submit to EPA for approval, in consultation with DTSC and RWQCB, a written Remedial Action Completion Report (RACR). Approval of the RACR by EPA, DTSC and the RWQCB signifies ~~the~~ Certification ~~foref~~ Completion of the Remedial Action.

A RACR should document the completion of the RA and may encompass the entire Site or a portion of the Site or a particular condition that may be subject to Regulatory Closure. For each of the remedial actions, the following standards apply:

- Performance Standards specified the RODs or removals are met;
- ICs are in place and effective;
- All RA Reports, On-Scene Coordinator Reports, and Pollution Reports have been completed;
- The Property is protective of human health and the environment; and
- The only remaining activities at the Property are O&M, including ICs monitoring and reporting.

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The RACR shall document and provide justification for any changes in remedial systems that may have resulted ~~in from~~ modifications implemented during compliance testing. If no significant modifications have occurred in remedial systems as a result of compliance testing, Respondent may submit written documentation as appropriate to request that EPA waive or abbreviate the requirements for the RACR. The RACR may be waived or abbreviated subject to prior written approval from EPA.

The RACR usually contains ten sections but should be tailored to the type of remediation conducted on the Property. The RACR shall be submitted for approval by EPA, in consultation with DTSC and RWQCB. The RACR shall be organized as follows, unless an alternative structure has been approved by EPA:

- I. Introduction
- II. Operable Unit Background
- III. Construction Activities
- IV. Chronology of Events
- V. Performance Standards and Construction Quality Control
- VI. Final Inspection and Certifications
- VII. Operation and Maintenance, including ICs
- VIII. Summary of Project Costs
- IX. Observations and Lessons Learned
- X. Operable Unit Contact Information
- XI. Appendix A - Remedial Action Report
- XII. Appendix B - Cost and Performance Summary

The RACR shall include a discussion of who is responsible for continued O&M, including O&M of ICs. The RACR shall include as-built drawings signed and stamped by a professional engineer registered in the State of California along with a statement that the RA has been completed in full satisfaction of the requirements of the AOC. The report shall also contain the following statement, signed by a responsible corporate official of the Respondent or the Respondent's Project Coordinator:

To the best of my knowledge, after thorough investigation, I certify that the information contained in or accompanying this submission is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

2.6 O&M/Performance Monitoring

Respondent shall conduct groundwater monitoring, air monitoring, performance monitoring for all components of the remedy, including LUCs, and perform necessary maintenance and repairs on all remedy components as required in the RAWP, or as otherwise directed by EPA, in consultation with DTSC and the RWQCB.

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2.6 Five Year Reviews

At sites where contaminants will remain at levels that will not permit unrestricted use of the site, a review will be conducted no less frequently than once every five years to ensure that the implemented remedy continues to be protective of human health and the environment.

The Respondent shall complete and submit a Five Year Review Report for review and approval by EPA in consultation with DTSC and RWQCB no less often than every five years beginning in 2023. The Navy will prepare the five-year review reports for 2013 and 2018 and submit them for review and approval by EPA, in consultation with DTSC and the RWQCB. Reports shall be similar to previous five-year review reports for HPNS and consistent with EPA guidance. The Five Year Review Reports should include the following information:

- Property summary;
- Description and objectives of remedial actions;
- A synopsis of the Work;
- Summary of activities addressing compliance with all ARARs and Performance Standards;
- Summary of ICs monitoring and enforcement activities;
- Description of community relations involvement activities and results and impacts of these activities;
- Areas of Noncompliance and status of corrective actions implemented;
- Description of any outstanding activities required by the AOC or SOW and schedule for implementation;
- Summary of Costs for performing the Work;
- Proposed suspension and termination of O&M for any environmental control system or control action. Respondent shall include documentation demonstrating that Performance Standards have been and will continue to be achieved.
- Analysis of O&M activities and any cost increases to determine if such increases warrant proposals of additional remedial actions to reduce O&M activities or contain rising costs; and
- Recommendations for future response actions.

Based on reviews of monitoring and O&M data or other Property-specific circumstances, EPA may require Respondent to perform additional studies and investigations and to summarize and analyze the results for EPA review and approval. EPA may also require Respondent to perform additional response actions.

2.7 **Removal** Action Work Plans and Implementation (if necessary)

During the performance of ~~RI/FS~~ and RD/RA, EPA, in consultation with DTSC and RWQCB, may determine that removal actions are necessary to address circumstances at the Property. These removal actions are short-term actions that are needed to stabilize or

Commented [mr12]: I lifted all of these Removal sections from the McClellan SOW. Do we need it?

Commented [A13]: This section is probably necessary and could be modified to address what the process is for addressing unanticipated conditions, new COCs, and/or areas.

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clean-up portions of the Property that pose an immediate threat to human health and the environment. The Respondent shall provide EPA with sufficient information and/or data to make such determinations. Upon issuance of an Action Memorandum by EPA Respondent shall perform any Time-Critical and Non-Time-Critical Removal Actions required by EPA. The removal actions performed should not be inconsistent with the long-term remedial actions proposed for the sites.

2.7.1 Time-Critical Removal Actions (TCRAs)

In accordance with the AOC, within 30 days after EPA's issuance of any Action Memorandum for a Time-Critical Removal Action (TCRA), Respondent shall submit to EPA for approval, with a copy to DTSC and RWQCB, a Time-Critical Removal Work Plan for performing the Removal Action described in any such Action Memorandum and this SOW. The Time-Critical Removal Work Plan shall provide a description of, and an expeditious schedule for, the actions required by such Action Memorandum. Except as otherwise indicated by EPA, Respondent shall prepare any adjustments to the QAPP and FSP as part of a Time-Critical Removal Work Plan. If EPA determines that it is appropriate, the Time-Critical Removal Work Plan shall also include contingency planning. Once approved, the Time-Critical Removal Work Plan, the schedule, and any subsequent modifications shall be incorporated into and shall be a requirement of this AOC, and Respondent shall conduct the activities required by the approved Time-Critical Removal Work Plan. Respondent shall not commence implementation of the Time-Critical Removal Work Plan developed hereunder until receiving written EPA approval, in consultation with DTSC and RWQCB. Time-critical removal actions should be completed within 6 months of the approval of the work plan.

2.7.2 Non-Time-Critical Removal Actions - Engineering Evaluation/Cost Analyses (EE/CA)

Unless otherwise directed by EPA, within 45 days after EPA issuance of an Engineering Evaluation/Cost Analyses (EE/CA) Approval Memorandum, Respondent shall submit to EPA, DTSC and RWQCB an EE/CA Work Plan for the implementation of any such EE/CA, including but not limited to: collection of all data necessary to characterize the area subject to the Non-Time-Critical Removal Action (NTCRA); an evaluation of risks; identification and analysis of Removal Action alternatives, and development of sufficient information to enable EPA to select appropriate NTCRAs for area(s) of the Property, after consultation with DTSC and RWQCB. A schedule for development of the EE/CA shall be included in the EE/CA Work Plan, for EPA approval, in consultation with DTSC and RWQCB.

2.7.3 Non-Time-Critical Removal Actions - Design

In the event that EPA issues any Action Memoranda for NTCRAs relating to any area of the Property following Respondent's performance of an EE/CA relating to such area, Respondent shall perform the NTCRA Design in accordance with CERCLA, the NCP, this SOW, and relevant guidance. If approved by EPA, after consultation with DTSC

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and RWQCB, taking into account the complexity of the Site conditions and the Removal Action, Respondent may prepare a Removal Action Work Plan in lieu of the components of the NTCRA Design and NTCRA Design Work Plan. In such cases, the Removal Action Work Plan must meet the substantive requirements of the NTCRA Design Work Plan and the NTCRA Design. The Respondent shall submit the NTCRA Design Work Plan for EPA approval in consultation with DTSC and RWQCB within 60 days of EPA's issuance the Action Memorandum. The NTCRA Design Work Plan shall provide for design of the NTCRA set forth in the Action Memorandum, and for the achievement of the Performance Standards and other requirements set forth in such Action Memorandum, the AOC, and this SOW. Upon approval by EPA, after consultation with DTSC and RWQCB, the NTCRA Design Work Plan shall be incorporated into and shall be a requirement of the AOC.

Unless EPA determines otherwise, the NTCRA Design Work Plan shall include plans and schedules for implementation of all NTCRA design and pre-design tasks identified in this SOW, including but not limited to plans and schedules for the completion of (i) a design sampling and analysis plan; including but not limited to a NTCRA Design QAPP; (ii) a Health and Safety Plan for field design activities; and (iii) a Construction Quality Assurance Plan. The NTCRA Design Work Plan may also include (iv) a treatability study; (v) a Pre-design Work Plan; (vi) a preliminary design submittal; (vii) an intermediate design submittal; and (viii) a pre-final/final design submittal. In addition, the NTCRA Design Work Plan shall include a schedule for completion of the NTCRA Design Work Plan. Upon approval of the NTCRA Design Work Plan by EPA, in consultation with DTSC and RWQCB, and review of the Health and Safety Plan for all field activities, Respondent shall implement the NTCRA Design Work Plan. Respondent shall submit to EPA, DTSC and RWQCB all schedules, plans, submittals and other deliverables required under the approved NTCRA Design Work Plan in accordance with the approved schedule for review and approval. Unless otherwise directed by EPA, Respondent shall not commence further NTCRA Design activities at the area subject to the NTCRA prior to approval of the NTCRA Design Work Plan.

2.7.4 Non-Time-Critical Removal Actions - Actions

In the event that EPA approves any NTCRA Design Work Plan submitted by Respondent for any area of the Property following Respondent's performance of an EE/CA relating to such area and EPA's issuance of an Action Memorandum for a NTCRA relating to such area, Respondent shall perform the NTCRA for such area in accordance with CERCLA, the NCP, this SOW, and relevant guidance. Within 30 days after EPA's approval of Respondent's NTCRA Design, Respondent shall submit to EPA for approval, in consultation with DTSC and RWQCB, a NTCRA Work Plan implementing the NTCRA set forth in the Action Memorandum and the approved NTCRA Design, and for the achievement of the Performance Standards and other requirements set forth in such Action Memorandum, approved NTCRA Design Work Plan, this AOC, and the SOW. Within 60 days after EPA approval of Respondent's NTCRA Work Plan for such area, Respondent shall commence performance of all activities detailed in the NTCRA Work Plan. Upon approval by EPA, the NTCRA Work Plan shall be incorporated into and

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shall be a requirement of this AOC. Respondent shall conduct all activities in accordance with the schedule required by the NTCRA Work Plan and this SOW, including but not limited to (i) construction in accordance with specifications; (ii) performance of Operation and Maintenance, if applicable; (iii) performance of construction quality assurance project plans; (iv) performance of sampling plans directed at measuring progress toward meeting performance standards; and (v) performance of contingency plans.

2.7.5 Pollution Reports (POLREPs)

EPA will prepare, in consultation with DTSC and RWQCB, Pollution Reports on each TCRA and NTCRA. The Respondent shall provide EPA with all information need to support the preparation of the POLREP. Guidance for the content of POLREPS is available in Directive 9360.3-03, Superfund Removal Procedures, Removal Response Reporting: POLREP and OSC Reports, June 1994.

2.7.5 On-Scene Coordinator Report (OSC Report)

EPA will prepare in consultation with DTSC and the RWQCB an On-Scene Coordinator Report on each TCRA and NTCRA. The OSC Report will summarize the removal activities undertaken, effectiveness of the removal activity, problems encountered and lessons learned. The Respondent shall provide EPA with all necessary information to complete the OSC Report. Guidance for writing OSC Reports are available in Directive 9360.3-03, Superfund Removal Procedures, Removal Response Reporting: POLREP and OSC Reports, June 1994.

2.8 Completion of Work Report

After the RA and O&M associated with the RA are complete, the Respondent shall prepare and submit a Final Completion of Remedial Action Report for review and approval by EPA in consultation with DTSC and the RWQCB. The RA shall be considered complete when all of the goals, performance standards and cleanup standards for the RA as stated in ROD and the approved Final Design have been met. The report shall include but not be limited to the following information:

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- Synopsis of the RA and a certification of the design and construction
- Listing of cleanup and performance standards as established during the ROD and any amendments to those standards
- Summary of any changes to approved plans
- Summary of monitoring activities addressing compliance with performance standards
- Certification that any systems are operating in full compliance with performance standards
- An index of all deliverables pursuant to this SOW and dates of modifications
- A description of activities including a schedule, necessary for transition of O&M activities to other parties if approved by EPA in consultation with the state
- Certification that the Environmental Restriction Covenants implemented pursuant to the ROD no longer needed.

Summary of SOW Tasks and Deliverables

Task	Subtask	Schedule	Deliverable
1. Project Management	Scoping Meeting	Within 30 Days of AOC	Meeting Minutes
	Monthly Progress Reports	By 10th of following month	Progress Reports
	Maintain Public Repository		
2. Community Involvement	Public Meetings Fact Sheets	Within 30 days of AOC	Community Relations Plan
3. RAWP	RA Work Plan(s) Dust Control Plan and Asbestos Dust Mitigation Plan HASP QAPP CQAP SAP Site Security Plan O&M Plan PSVP LUCIP SWPPP	Within 30 days of AOC	Remedial Action Work Plan
4. Remedy Implementation	Remedy Construction LUC Implementation	At time of any transfer	Deeds, CRUPs, etc.
5. Remedial Action Closeout	Pre-Final Construction Inspection	Within 60 days of completion of Remedial	

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	Final Construction Inspection RACR	Activities	RACR
6. O&M/Performance Monitoring			O&M Data Annual Progress Reports
7. 5-Year Review Report			Final 5-Year Review Report
8. Removal Action Work Plan(s) and Implementation	TCRA		TCRA Work Plan POLREP(s) OSC Report(s)
	NTCRA		EE/CA NTCRA Design NTCRA Work Plan POLREP(s) OSC Report(s)
9. Completion of Work			Work Completion Report

Acronyms Used in this SOW

AOC	Administrative Order on Consent
ARAR	Applicable or Relevant and Appropriate Requirement
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CIP	Community Involvement Plan
CSM	Conceptual Site Model
CQAP	Construction Quality Assurance Plan
DTSC	Department of Toxics Substances Control
DQO	Data Quality Objective
EE	Engineering Evaluation
EPA	United States Environmental Protection Agency
ETCA	Early Transfer Cooperative Agreement
FFA	Federal Facilities Agreement
FSP	Field Sampling Plan
HSP	Health and Safety Plan
IC	Institutional Control
NCP	National Contingency Plan or National Oil and Hazardous Substances Pollution Contingency Plan
NTCRA	Non-Time-Critical Removal Action
O&M	Operations and Maintenance
OSC	On-Scene Coordinator
PCBs	Polychlorinated biphenyls
POLREP	Pollution Report
PP	Proposed Plan
PSVP	Performance System Verification Plan
QA	Quality Assurance

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QAPP	Quality and Assurance Project Plan
QC	Quality Control
RA	Remedial Action
RACR	Remedial Action Completion Report
RAO	Remedial Action Objective
RAWP	Remedial Action Work Plan
RD	Remedial Design
ROD	Record of Decision
RI	Remedial Investigation
RWQCB	Regional Water Quality Control Board
SAP	Sampling and Analysis Plan
SOW	Statement of Work
SWPPP	Storm Water Pollution Prevention Plan
TCRA	Time-Critical Removal Action